

0280

JH Co

OIEP

RAW SEQUENCE LISTING

DATE: 02/09/2001

PATENT APPLICATION: US/09/772,103

TIME: 09:36:32

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\02092001\I772103.raw

ENTERED

```

3 <110> APPLICANT: Carreno, Beatriz M.
4   Wood, Clive
5   Turner, Katherine
6   Collins, Mary
7   Gray, Gary S.
8   Morris, Donna
9   O'Hara, Denise
10  Hinton, Paul
11  Tsurushita, Naoya
13 <120> TITLE OF INVENTION: ANTIBODIES AGAINST CTLA4 AND USES THEREFOR
15 <130> FILE REFERENCE: GNN-009CP
C--> 17 <140> CURRENT APPLICATION NUMBER: US/09/772,103
C--> 18 <141> CURRENT FILING DATE: 2001-01-23
20 <150> PRIOR APPLICATION NUMBER: 60/178,473
21 <151> PRIOR FILING DATE: 2000-01-27
23 <160> NUMBER OF SEQ ID NOS: 10
25 <170> SOFTWARE: PatentIn Ver. 2.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 672
29 <212> TYPE: DNA
30 <213> ORGANISM: Homo sapiens
32 <220> FEATURE:
34 <400> SEQUENCE: 1
35 atggcttgcc ttggatttca gcggcacaag gctcagctga acctggctgc caggacctgg 60
36 ccttgcaactc tectgttttt tcttctcttc atccctgtct tctgcaaaagc aatgcacgtg 120
37 gccagcctg ctgtgttact ggccagcagc cgaggcatcg ccagctttgt gtgtgagtat 180
38 gcatctccag gcaaaagccac tgaggteccg gtgacagtgc ttccggcaggc tgacagccag 240
39 gtgactgaag tctgtgcggc aacctacatg acggggaatg agttgacctt cctagatgat 300
40 tccatctgca cgggcacctc cagtggaaat caagtgaacc tcactatcca aggactgagg 360
41 gccatggaca cgggactcta catctgcaag gtggagctca tgtaccacc gccatactac 420
42 ctgggcatag gcaacggaac ccagatttat gtaattgac cagaacctg cccagattct 480
43 gacttcctcc tctggatcct tgcagcagtt agttcggggt tgttttttta tagctttctc 540
44 ctcacagctg ttcttttgag caaaatgcta aagaaaagaa gccctcttac aacaggggtc 600
45 tatgtgaaaa tgcccccaac agagccagaa tgtgaaaagc aatttcagcc ttattttatt 660
46 cccatcaatt ga                                     672
48 <210> SEQ ID NO: 2
49 <211> LENGTH: 223
50 <212> TYPE: PRT
51 <213> ORGANISM: Homo sapiens
53 <400> SEQUENCE: 2
54 Met Ala Cys Leu Gly Phe Gln Arg His Lys Ala Gln Leu Asn Leu Ala
55   1           5           10           15
57 Thr Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro
58   20           25           30
60 Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala
61   35           40           45
63 Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly

```

RAW SEQUENCE LISTING

DATE: 02/09/2001

PATENT APPLICATION: US/09/772,103

TIME: 09:36:32

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\02092001\I772103.raw

```

64      50      55      60
66 Lys Ala Thr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln
67 65      70      75      80
69 Val Thr Glu Val Cys Ala Ala Thr Tyr Met Met Gly Asn Glu Leu Thr
70      85      90      95
72 Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val
73      100      105      110
75 Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile
76      115      120      125
78 Cys Lys Val Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly
79      130      135      140
81 Asn Gly Ala Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser
82 145      150      155      160
84 Asp Phe Leu Leu Trp Ile Leu Ala Ala Val Ser Ser Gly Leu Phe Phe
85      165      170      175
87 Tyr Ser Phe Leu Leu Thr Ala Val Ser Leu Ser Lys Met Leu Lys Lys
88      180      185      190
90 Arg Ser Pro Leu Thr Thr Gly Val Tyr Val Lys Met Pro Pro Thr Glu
91      195      200      205
93 Pro Glu Cys Glu Lys Gln Phe Gln Pro Tyr Phe Ile Pro Ile Asn
94      210      215      220
97 <210> SEQ ID NO: 3
98 <211> LENGTH: 426
99 <212> TYPE: DNA
100 <213> ORGANISM: Mus musculus
102 <400> SEQUENCE: 3
103 atggetgtcc tgggtgctgtt cctctgcctg gttgcatttc caagctgtgt cctgtccag 60
104 gtgcagctga aggagtcagg acctggcctg gtggcgccct cacagagcct gtccatcaact 120
105 tgcactgtct ctgggttttc attaaccagc tatggtgtat attgggttcg ccagcctcca 180
106 ggaagggttc tggagtggct gggagtaata tagggctggt ggaaccacaa attataatc 240
107 ggctctatgt ccagactgag catcagcaaa gacaactcca agagccaagt ttcttataaa 300
108 atgagcagtc tgcactga tgacacagcc atgtactact gtgccagggg cccccgcac 360
109 gctatgatga agagaggcta tgctatggac tactggggac aagggaacctc agtcacgctc 426
110 tcctca
112 <210> SEQ ID NO: 4
113 <211> LENGTH: 142
114 <212> TYPE: PRT
115 <213> ORGANISM: Mus musculus
117 <400> SEQUENCE: 4
118 Met Asp Val Leu Val Leu Phe Leu Cys Leu Val Ala Phe Pro Ser Cys
119 1 5 10 15
121 Val Leu Ser Gln Val Gln Leu Lys Glu Ser Gly Pro Gly Leu Val Ala
122 20 25 30
124 Pro Ser Gln Ser Leu Ser Ile Thr Cys Thr Val Ser Gly Phe Ser Leu
125 35 40 45
127 Thr Ser Tyr Gly Val Tyr Trp Val Arg Gln Pro Pro Gly Lys Gly Leu
128 50 55 60
130 Glu Trp Leu Gly Val Ile Trp Ala Gly Gly Thr Thr Asn Tyr Asn Ser
131 65 70 75 80

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/772,103

DATE: 02/09/2001
 TIME: 09:36:32

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\02092001\I772103.raw

```

133 Ala Leu Met Ser Arg Leu Ser Ile Ser Lys Asp Asn Ser Lys Ser Gln
134                               85                      90                      95
136 Val Phe Leu Lys Met Ser Ser Leu Gln Thr Asp Asp Thr Ala Met Tyr
137                               100                     105                     110
139 Tyr Cys Ala Arg Gly Pro Pro His Ala Met Met Lys Arg Gly Tyr Ala
140                               115                     120                     125
142 Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Ile Val Ser Ser
143                               130                     135                     140
146 <210> SEQ ID NO: 5
147 <211> LENGTH: 384
148 <212> TYPE: DNA
149 <213> ORGANISM: Mus musculus
151 <400> SEQUENCE: 5
152 atggattttc aagtcagat tttcagcttc ctgctaataca gtgcctcagt catactgtcc 60
153 agaggacaaa atgttctcac ccagtcctcca gcaatcatgc ctgcatctcc aggggagaag 120
154 gtcacccatga cctgcagtgc cactcgaagt ataacttaca tgtctctgga ccagcagaag 180
155 tcaggatcct cccccagact cctgatttat gacacatcca acctggcttc tggagtccct 240
156 gttcgcttca gtggcagtggt gtctggggacc tcttactctc tcacaatcag ccgaatggag 300
157 gctgaagatg ctgccactta ttactgccag cagtggagta gttaccgcgt cacgttcggt 360
158 gctgggacca agctggagct gaaa                                384
160 <210> SEQ ID NO: 6
161 <211> LENGTH: 128
162 <212> TYPE: PRT
163 <213> ORGANISM: Mus musculus
165 <400> SEQUENCE: 6
166 Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
167 1 5 10 15
169 Val Ile Leu Ser Arg Gly Gln Asn Val Leu Thr Gln Ser Pro Ala Ile
170 20 25 30
172 Met Pro Ala Ser Pro Gly Glu Lys Val Thr Met Thr Cys Ser Ala Thr
173 35 40 45
175 Ser Ser Ile Thr Tyr Met Ser Trp Tyr Gln Gln Lys Ser Gly Ser Ser
176 50 55 60
178 Pro Arg Leu Leu Ile Tyr Asp Thr Ser Asn Leu Ala Ser Gly Val Pro
179 65 70 75 80
181 Val Arg Phe Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
182 85 90 95
184 Ser Arg Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp
185 100 105 110
187 Ser Ser Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
188 115 120 125
191 <210> SEQ ID NO: 7
192 <211> LENGTH: 413
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial Sequence
196 <220> FEATURE:
197 <223> OTHER INFORMATION: Description of Artificial Sequence: Humanized mouse
199 <400> SEQUENCE: 7
200 tctagaccac catggatttt caagtcagaga tcttcagctt cctgctaate agtgcctcgt 60

```

RAW SEQUENCE LISTING DATE: 02/09/2001
 PATENT APPLICATION: US/09/772,103 TIME: 09:36:32

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\02092001\I772103.raw

```

201 catactgtcc agaggagata tccagatgac ccagtctcca tctctccctat ccgcategtt 120
202 ggggacaggg tcaccataac ctgtagtgcc acctcaagta taacttacat gtctgtatc 180
203 agcagaagcc aggaaaggct cccaagcttc tgatttatga cacatccaac ctggctctgg 240
204 ggtacctagc cgttccagtg gcagtgggtc tgggaccgac tacacactca caatagcagc 300
205 ctgcagccag aagattttgc caettattac tgcacgcagt ggagtagtta cccctcacgt 360
206 tcggtggagg gaccaagggt gagataaaac gtaagtagaa tccaaagtct aga 413
208 <210> SEQ ID NO: 8
209 <211> LENGTH: 128
210 <212> TYPE: PRT
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Description of Artificial Sequence:Humanized mouse
216 <400> SEQUENCE: 8
217 Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
218 1 5 10 15
220 Val Ile Leu Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
221 20 25 30
223 Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Thr
224 35 40 45
226 Ser Ser Ile Thr Tyr Met Ser Trp Tyr Gln Gln Lys Pro Gly Lys Ala
227 50 55 60
229 Pro Lys Leu Leu Ile Tyr Asp Thr Ser Asn Leu Ala Ser Gly Val Pro
230 65 70 75 80
232 Ser Arg Phe Ser Gly Ser Gly Thr Asp Tyr Thr Leu Thr Ile
233 85 90 95
235 Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Trp
236 100 105 110
238 Ser Ser Tyr Pro Leu Thr Phe Gly Gly Thr Lys Val Glu Ile Lys
239 115 120 125
242 <210> SEQ ID NO: 9
243 <211> LENGTH: 460
244 <212> TYPE: DNA
245 <213> ORGANISM: Artificial Sequence
247 <220> FEATURE:
248 <223> OTHER INFORMATION: Description of Artificial Sequence:Humanized mouse
250 <400> SEQUENCE: 9
251 tctagaccac catggctgtc ctgggtgtgt tctctgcct ggttgcattt ccaagctgtg 60
252 tctctgtcca ggtgcagctg caagagtcag gacctggcct ggtgaagccc tcacagacac 120
253 tgtccttgac ttgcactgtc tctgggtttt cattaacctc atatggtgta tattgggttc 180
254 gccagcctcc aggaaagggt ctggagtggc tgggagtaat atgggctggt ggtaccacaa 240
255 attataattc ggtctctcatg tccagactga caatcagcaa agacacatcc aagaaccaag 300
256 ttctcttaaa actcagcagt gtgactgcag cggacacagc cgtctactac tgtgcccgag 360
257 gccccccgca cgctatgatg aagagaggct atgctatgga ctactgggga caaggaaccc 420
258 tagtcacagt ctctcaggt gagtccttaa aacctctaga 460
260 <210> SEQ ID NO: 10
261 <211> LENGTH: 142
262 <212> TYPE: PRT
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/772,103
 DATE: 02/09/2001
 TIME: 09:36:32

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\02092001\I772103.raw

266 <223> OTHER INFORMATION: Description of Artificial Sequence: Humanized mouse
 268 <400> SEQUENCE: 10
 269 Met Ala Val Leu Val Leu Phe Leu Cys Leu Val Ala Phe Pro Ser Cys
 270 1 5 10 15
 272 Val Leu Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys
 273 20 25 30
 275 Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Ser Leu
 276 35 40 45
 278 Thr Ser Tyr Gly Val Tyr Trp Val Arg Gln Pro Pro Gly Lys Gly Leu
 279 50 55 60
 281 Glu Trp Leu Gly Val Ile Trp Ala Gly Gly Thr Thr Asn Tyr Asn Ser
 282 65 70 75 80
 284 Ala Leu Met Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Asn Gln
 285 85 90 95
 287 Val Ser Leu Lys Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val Tyr
 288 100 105 110
 290 Tyr Cys Ala Arg Gly Pro Pro His Ala Met Met Lys Arg Gly Tyr Ala
 291 115 120 125
 293 Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 294 130 135 140

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/772,103

DATE: 02/09/2001

TIME: 09:36:33

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\02092001\I772103.raw

L:17 M:270 C: Current Application Number differs, Replaced Application Number
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date